

## **Remarks/Arguments**

### **Request for Reconsideration**

Applicant has carefully considered the matters raised by the Examiner in the outstanding Office Action but remains of the opinion that patentable subject matter is present. Applicant respectfully requests reconsideration of the Examiner's position based on the above amendments to the claims and the following remarks.

#### **A. Status of the Claims**

As a result of the present amendment, Claims 7 – 12 are presented for continued examination.

#### **B. The Presently Claimed Invention**

The presently claimed invention comprises at least one fiber optic sensor that extends in the front region of a motor vehicle, the sensor being deformable by the collision of motor vehicle with an object and which generates a signal in response to the collision, and at least one infrared sensor which generates a signal in response to detection of an animate object to distinguish between a collision of the vehicle with an animate object or an inanimate object.

#### **C. Claim Rejection Under 35 USC §112**

Claim 9 was rejected as allegedly indefinite, for not referencing a prior claim. This claim has been amended to depend from Claim 7. Applicant requests withdrawal of this rejection.

#### **D. Claims Rejected Under 35 USC §103**

The Examiner rejected Claim 7 as allegedly obvious over Hsiang (US 2002/0039065) in view of Nagaoka (US 2009/0046151). The Examiner stated that Hsiang teaches a sensor system including a fiber optic sensor which deforms upon collision of/with an object, but does not teach an infrared sensor for distinguishing between the collision of animate and inanimate objects. The

Examiner stated that Nagaoka teaches an infrared sensor for a vehicle which distinguishes between animate and inanimate objects. The Examiner stated that it would have been obvious to modify Hsiang's system to have an infrared sensor system of Nagaoka to distinguish between animate and inanimate objects.

Applicant respectfully traverses this rejection. The Hsiang reference relates to using a fiber optic as an image-capture device, and does not teach using fiber optics to detect collisions with any objects. In the presently-claimed invention, the fiber object is deformable, and the deformity in the fiber optic causes a change in its curvature which provides the signal indicating the collision. The fiber optic itself is the sensor. The fiber optic is relatively inexpensive, robust, and provides a fast output indicating the collision. Using a fiber optic itself to detect collisions is more advantageous than the video camera arrangement of Hsiang, which is more expensive, slow and fragile.

The Nagaoka reference relates to use of an infrared camera for obtaining an image, and the image is then analyzed using a processor and high data processing power. This system does not use an infrared sensor to distinguish between animate and inanimate objects. Each of the cited references are deficient for the purposes for which they are cited.

The systems of Hsiang and Nagaoka are very much different, and one skilled in the art would not find it obvious to combine them. Moreover, because each of the cited references are deficient for the purposes for which they are cited, even if the references were somehow combined, the combination would still not provide the invention of Claim 7. Applicant respectfully requests withdrawal of the rejection of Claim 7. The other claims depend from Claim 7 and should be allowable for at least the same reasons that Claim 7 is patentable over the cited references.

**E. Fees**

No fees are believed to be due. However, if any fee is determined to be due, authorization is hereby given to charge the fee to deposit account #02-2275. Pursuant to 37 C.F.R. 1.136(a)(3),

please treat this and any concurrent or future reply in this application that requires a petition for an extension of time for its timely submission as incorporating a petition for extension of time for the appropriate length of time. The fee associated therewith is to be charged to Deposit Account No. 02-2275.

**F. Conclusion**

In view of the amendments and arguments presented, it is respectfully submitted that each and every one of the matters raised by the Examiner has been addressed by the present amendment and that the present application is now in condition for allowance.

An early and favorable action on the merits is earnestly solicited.

Respectfully submitted

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